#8 RP 6-13-02

PCT09

RAW SEQUENCE LISTING DATE: 04/11/2002
PATENT APPLICATION: US/09/980,525 TIME: 16:06:22

Input Set : A:\07039-28001.txt
Output Set: N:\CRF3\04112002\I980525.raw

ENTERED

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     4 <110> APPLICANT: Simari, Robert
     6 <120> TITLE OF INVENTION: Adenovirus vectors encoding brain natriuretic peptide
     8 <130> FILE REFERENCE: 07039-280001
    10 <140> CURRENT APPLICATION NUMBER: US 09/980,525
C--> 11 <141> CURRENT FILING DATE: 2002-03-18
    13 <150> PRIOR APPLICATION NUMBER: PCT/US00/14351
    14 <151> PRIOR FILING DATE: 2000-05-24
    16 <150> PRIOR APPLICATION NUMBER: US 60/135,490
    17 <151> PRIOR FILING DATE: 1999-05-24
    19 <160> NUMBER OF SEQ ID NOS: 18
    21 <170> SOFTWARE: FastSEQ for Windows Version 4.0
    23 <210> SEQ ID NO: 1
    24 <211> LENGTH: 1922
    25 <212> TYPE: DNA
    26 <213> ORGANISM: Homo sapiens
    28 <400> SEQUENCE: 1
    29   ctgtgagatc accccgtgct cccagcgctc acgtcggtcc tcggaaagcc ggggtcctcc      60
    30   ctgccttttc cagcaacggt ggggtgggga ggcaggaaga aagcgccaac ctaggacccc     120
    31   ggagatttgc agcaaaggaa gaagcgggag acgggcactt gtctgtgtct ccagcgcgtt     180
    32   cctgcccccc gccgacccgg cccatttcta tacaaggtcg ctctgcccgg tctccacctc     240
    33   ccacgtgcag gccgcggagg ggctcattcc cgggccctga tctcagaggc ccggaatgtg     300
    34   gctgataaat cagagactag acctgcatgg caggcaggcc cgacactcag ctccaggata     360
    35   aaaggccacg gtgtcccgag gagccaggag gagcaccccg caggctgagg gcaggtggga     420
    36   agcaaacccg gacgcatcgc agcagcagca gcagcagcag aagcagcagc agcagcctcc     480
    37   gcagtccctc cagagacatg gatccccaga cagcaccttc ccgggcgctc ctgctcctgc     540
    38   tcttcttgca tctggctttc ctgggaggtc gttcccaccc gctgggcagc cccggttcag     600
    39   cctcggactt ggaaacgtcc gggttacagg tgagagcgga gggcagctca gggggattgg     660
    40   acagcagcaa tgaaagggtc ctcacctgct gtcccaagag gccctcatct ttcctttgga     720
    41   attagtgata aaggaatcag aaaatggaga gactgggtgc cctgaccctg tacccaaggc     780
    42   agtcggttca cttgggtgcc atgaagggct ggtgagccag gggtgggtcc ctgaggcttg     840
    43   gacgccccca ttcattgcag gagcagcgca accatttgca gggcaaactg tcggagctgc     900
    44   aggtggagca gacatccctg gagcccctcc aggagagccc ccgtcccaca ggtgtctgga     960
    45   agtcccggga ggtagccacc gagggcatcc gtgggcaccg caaaatggtc ctctacaccc    1020
    46   tgcgggcacc acgaagcccc aagatggtgc aagggtctgg ctgctttggg aggaagatgg    1080
    47   accggatcag ctcctccagt ggcctgggct gcaaaggtaa gcacccccctg ccaccccggc   1140
    48   cgccttcccc cattccagtg tgtgacactg ttagagtcac tttggggttt gttgtctctg    1200
    49   ggaaccacac tctttgagaa aaggtcacct ggacatcgct tcctcttgtt aacagccttc    1260
    50   agggccaagg ggtgcctttg tggaattagt aaatgtgggc ttatttcatt accatgccca    1320
    51   caataccttc tccccacctc ctacttctta tcaaaggggc agaatctcct ttgggggtct    1380
    52   gtttatcatt tggcagcccc ccagtggtgc agaaagagaa ccaaacattt cctcctggtt    1440
    53   tcctctaaac tgtctatagt ctcaaaggca gagagcagga tcaccagagc aatgataatc    1500
    54   cccaatttac agatgaggaa actgaggctc agagagttgc attaagcctc aaacgtctga    1560
    55   tgactaacag ggtggtgggt ggcacacgat gaggtaagct cagcccctgc ctccatctcc    1620
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56   caccctaacc atcatcaccc tctctctttc cctgacagtg ctgaggcggc attaagagga    1680
57   agtcctggct gcagacacct gcttctgatt ccacaagggg ctttttcctc aaccctgtgg    1740
58   ccgcctttga agtgactcat tttttttaat gtatttatgt atttatttga ttgttttata    1800
59   taagatggtt tcttaccttt gagcacaaaa tttccacggt gaaataaagt caacattata    1860
60   agctttatct tttgaaactg atttgtcttg gcgcattaaa aataatccct catttcaaag    1920
61   aa                                                                  1922
63 <210> SEQ ID NO: 2
64 <211> LENGTH: 134
65 <212> TYPE: PRT
66 <213> ORGANISM: Homo sapiens
68 <400> SEQUENCE: 2
69   Met Asp Pro Gln Thr Ala Pro Ser Arg Ala Leu Leu Leu Leu Leu Phe
70    1               5                  10                  15
71   Leu His Leu Ala Phe Leu Gly Gly Arg Ser His Pro Leu Gly Ser Pro
72               20                  25                  30
73   Gly Ser Ala Ser Asp Leu Glu Thr Ser Gly Leu Gln Glu Gln Arg Asn
74           35                  40                  45
75   His Leu Gln Gly Lys Leu Ser Glu Leu Gln Val Glu Gln Thr Ser Leu
76       50                  55                  60
77   Glu Pro Leu Gln Glu Ser Pro Arg Pro Thr Gly Val Trp Lys Ser Arg
78   65                  70                  75                  80
79   Glu Val Ala Thr Glu Gly Ile Arg Gly His Arg Lys Met Val Leu Tyr
80                   85                  90                  95
81   Thr Leu Arg Ala Pro Arg Ser Pro Lys Met Val Gln Gly Ser Gly Cys
82               100                 105                 110
83   Phe Gly Arg Lys Met Asp Arg Ile Ser Ser Ser Ser Gly Leu Gly Cys
84           115                 120                 125
85   Lys Val Leu Arg Arg His
86       130
88 <210> SEQ ID NO: 3
89 <211> LENGTH: 32
90 <212> TYPE: PRT
91 <213> ORGANISM: Canis sp.
93 <400> SEQUENCE: 3
94   Ser Pro Lys Met Met His Lys Ser Gly Cys Phe Gly Arg Arg Leu Asp
95    1               5                  10                  15
96   Arg Ile Gly Ser Leu Ser Gly Leu Gly Cys Asn Val Leu Arg Lys Tyr
97               20                  25                  30
99 <210> SEQ ID NO: 4
100 <211> LENGTH: 1803
101 <212> TYPE: DNA
102 <213> ORGANISM: Canis sp.
104 <400> SEQUENCE: 4
105   cgatcaggga tgttggggcg gaggaaacgg agggaaggag ggagcggagg aggcccgagg      60
106   actgttggtg tccccctcct gccctttgg ggccaggccc acttctatac aaggcctgct     120
107   ctccagcctc caccccggcg ggtatggtgc aggcgcggag gggcgcattc ccccgccctg     180
108   agctcagcgg ccggaatgcg gccgataaat cagagataac cccaggcgcg ggataaggga     240
109   taaaaagccc ccgttgccgc gggatccagg agagcacccg cgccccaagc ggtgacactc     300
110   gaccccggtc gcagcgcagc agctcagcag ccggacgtct ctttccccac ttctctccag     360
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111  cgacatggag ccctgcgcag cgctgccccg ggccctcctg ctcctcctgt tcttgcacct    420
112  gtcgccactc ggaggccgcc cccacccgct gggcggccgc agccccgcct cggaagcctc    480
113  ggaagcctca gaagcctcgg ggttgtgggc cgtgcaggtg agcgctcagc ctgcctgaag    540
114  gccgcggcgg gtggcagcag gtcacggggg cttagccact gtcccaagtc ctcagtctcc    600
115  cttgggaatt agtgataagg gaatcagaaa gtgacgagat tgggtgccag gactccatac    660
116  ccaaggcggc ggcttcactt gggtgcaagg gtggttccgc cccggcgtgg gttcctgagg    720
117  ctcaggccgt ccattgcagg agctgctggg ccgtctgaag gacgcagttt cagagctgca    780
118  ggcagagcag ttggccctgg aacccctgca ccggagccac agccccgcag aagccccgga    840
119  ggccggagga acgccccgtg gggtccttgc accccatgac agtgtcctcc aggccctgag    900
120  aagactacgc agccccaaga tgatgcacaa gtcagggtgc tttggccgga ggctggaccg    960
121  gatcggctcc ctcagtggcc tgggctgcaa tggtaagccg cctccctgcc gccttggctc   1020
122  ccctcccca gccccctggg ttcgaccctt ggaacccctt ctgggtttgt tgtctcgggg   1080
123  gatcacactc tgaggaaagg acatctggac atcgctcctt cttgctgaca gtcctaaggg   1140
124  ccaaggagta cgtttctgga aatactacgt gtggacatcg ttgtccaggg tccctaccca   1200
125  cctcctagcc ccctcctgcc tctcgcaccc aagggcagaa tcatcttagg atggaatcag   1260
126  tcgttgtctg gaagcatctc cttggagcag aaagagtcct aaacatcgtc ctcgtagctc   1320
127  tctctgtctg tctgtagcca cgaaggcaga ggtcagggtc accagggcag tgatgattcc   1380
128  cagttaacag aggaggagac tgaggtctag agagatggat tattccaaag cctcaaacat   1440
129  ccagatcggc tgagggtggg gttggtggca gggatggctc ctgggcttgg gaagctcgga   1500
130  tcctgcctca gtctcccacc tgacgccatc atccccctct ctctcctccc acagtgctga   1560
131  gaaagtatta aggaggaagt cccgactgcc cacatctgca ttggattctt cagcagcccc   1620
132  tgagcccctt ggaagcagat cttatttatt cgtatttatt tatttattta tttcgattgt   1680
133  tttatataag atgatcctga cgcccgagca cggattttcc acggtgaaat aaagtcaacc   1740
134  ttagagcttc ttttgaaacc gatttgtccc tgtgcattaa aagtaacaca tcatttaaaa   1800
135  aaa                                                                1803
137 <210> SEQ ID NO: 5
138 <211> LENGTH: 4
139 <212> TYPE: PRT
140 <213> ORGANISM: Artificial Sequence
142 <220> FEATURE:
143 <223> OTHER INFORMATION: consensus sequence
W--> 145 <221> NAME/KEY: VARIANT
146 <222> LOCATION: (2)...(3)
147 <223> OTHER INFORMATION: Xaa = Any Amino Acid
W--> 149 <400> 5
W--> 150  Arg Xaa Xaa Arg
151   1
153 <210> SEQ ID NO: 6
154 <211> LENGTH: 330
155 <212> TYPE: DNA
156 <213> ORGANISM: Homo sapiens
158 <400> SEQUENCE: 6
159  tcccacccgc tgggcagccc cggttcagcc tcggacttgg aaacgtccgg gttacaggag     60
160  cagcgcaacc atttgcaggg caaactgtcg gagctgcagg tggagcagac atccctggag    120
161  ccctccagg agagcccccg tcccacaggt gtctggaagt cccgggaggt agccaccgag    180
162  ggcatccgtg ggcaccgcaa aatggtcctc tacaccctgc gggcaccacg aagccccaag    240
163  atggtgcaag ggtctggctg ctttgggagg aagatggacc ggatcagctc ctccagtggc    300
164  ctgggctgca aagtgctgag gcggcattaa                                    330
166 <210> SEQ ID NO: 7
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<211> LENGTH: 109
<212> TYPE: PRT
<213> ORGANISM: Homo sapiens
<400> SEQUENCE: 7

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Ser His Pro Leu Gly Ser Pro Gly Ser Ala Ser Asp Leu Glu Thr Ser
 1               5                  10                  15
Gly Leu Gln Glu Gln Arg Asn His Leu Gln Gly Lys Leu Ser Glu Leu
            20                  25                  30
Gln Val Glu Gln Thr Ser Leu Glu Pro Leu Gln Glu Ser Pro Arg Pro
        35                  40                  45
Thr Gly Val Trp Lys Ser Arg Glu Val Ala Thr Glu Gly Ile Arg Gly
    50                  55                  60
His Arg Lys Met Val Leu Tyr Thr Leu Arg Ala Pro Arg Ser Pro Lys
65                  70                  75                  80
Met Val Gln Gly Ser Gly Cys Phe Gly Arg Lys Met Asp Arg Ile Ser
                85                  90                  95
Ser Ser Ser Gly Leu Gly Cys Lys Val Leu Arg Arg His
            100                 105
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<210> SEQ ID NO: 8
<211> LENGTH: 99
<212> TYPE: DNA
<213> ORGANISM: Homo sapiens
<400> SEQUENCE: 8

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agccccaaga tggtgcaagg gtctggctgc tttgggagga agatggaccg gatcagctcc    60
tccagtggcc tgggctgcaa agtgctgagg cggcattaa                           99
```

<210> SEQ ID NO: 9
<211> LENGTH: 32
<212> TYPE: PRT
<213> ORGANISM: Homo sapiens
<400> SEQUENCE: 9

```
Ser Pro Lys Met Val Gln Gly Ser Gly Cys Phe Gly Arg Lys Met Asp
 1               5                  10                  15
Arg Ile Ser Ser Ser Ser Gly Leu Gly Cys Lys Val Leu Arg Arg His
            20                  25                  30
```

<210> SEQ ID NO: 10
<211> LENGTH: 145
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: primer
<400> SEQUENCE: 10

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gcagatatcc atggatcccc agacagcacc ttcccgggcg ctcctgctcc tgctcttctt    60
gcatctggct ttcctgggag gtcgttccca cccgctgggc gaggtgaagt acgacccctg   120
cttcggccac aagatcgacc gcatc                                         145
```

<210> SEQ ID NO: 11
<211> LENGTH: 127
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:

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<223> OTHER INFORMATION: primer

<400> SEQUENCE: 11

gaagatcttc ttaggcgctg gtgctggggg cgttggggcg ggggtcgcgc aggctggggc 60
agcccaggtt gctcacgtgg ttgatgcggt cgatcttgtg gccgaagcag gggtcgtact 120
tcacctc 127

<210> SEQ ID NO: 12
<211> LENGTH: 30
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: primer

<400> SEQUENCE: 12

tgcagatatc catggatccc cagacagcac 30

<210> SEQ ID NO: 13
<211> LENGTH: 32
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: primer

<400> SEQUENCE: 13

gaagatcttc ttaggcgctg gtgctggggg cg 32

<210> SEQ ID NO: 14
<211> LENGTH: 24
<212> TYPE: DNA
<213> ORGANISM: Homo sapiens

<400> SEQUENCE: 14

catcttgggg cttcgtggtg cccg 24

<210> SEQ ID NO: 15
<211> LENGTH: 176
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: primer

<400> SEQUENCE: 15

gaagatcttc ttaggcgctg gtgctggggg cgttggggcg ggggtcgcgc aggctggggc 60
agcccaggtt gctcacgtgg ttgatgcggt cgatcttgtg ggccgaagca ggggtcgtac 120
ttcacctcca tcttggggct tcgtggtgcc cgcagggtgt agaggaccat tttgcg 176

<210> SEQ ID NO: 16
<211> LENGTH: 28
<212> TYPE: PRT
<213> ORGANISM: Homo sapiens

<400> SEQUENCE: 16

Ser Leu Arg Arg Ser Ser Cys Phe Gly Gly Arg Met Asp Arg Ile Gly
1 5 10 15
Ala Gln Ser Gly Leu Gly Cys Asn Ser Phe Arg Tyr
20 25

<210> SEQ ID NO: 17
<211> LENGTH: 22
<212> TYPE: PRT